



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.          | CONFIRMATION NO.       |
|---|-------------|----------------------|------------------------------|------------------------|
| 10/802,027  | 03/17/2004  | Yukio Shoji          | 040122                       | 3468                   |
| 23850 7590 11/12/2008<br>KRATZ, QUINTOS & HANSON, LLP<br>1420 K Street, N.W.<br>Suite 400<br>WASHINGTON, DC 20005 |             |                      | EXAMINER<br>DRODGE, JOSEPH W |                        |
|   |             |                      | ART UNIT<br>1797             | PAPER NUMBER           |
|   |             |                      | MAIL DATE<br>11/12/2008      | DELIVERY MODE<br>PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/802,027

**Applicant(s)**

SHOJI ET AL.

**Examiner**

Joseph W. Drodge

**Art Unit**

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/CB/CIC)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Claims 1-9 and 12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. It is not apparent where in the Specification and/or drawings support can be found for hollow filter. Actually the figures appear to instead teach a radially extending depth filter arranged annularly around an inflow conduit as in figures 1,2,4 and 5 or outflow conduit as in figure 3. Additionally, it is unclear what surfaces of the Specification and Drawings constitute the recited end surfaces. Hence, recitation of the filter element being substantially hollow and having end surfaces intermediate the inner and outer peripheral surfaces are deemed New Matter.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action, amendments and clarifications to the rejections made in this Final office action are in bold-face and are underlined:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Stutzman patent 5,271,850.

Stutzman discloses [for claims 1 and 8] inflow chamber (space bounded by flow baffle 16, housing sidewall 18 and top cover 12 of the filtration unit 10 including annular space 29 outside of peripheral jacket 27) communicating with inlet 7 from which fluid flows, outflow chamber 25

communicating with outlet 15, cylindrical filter element 20 that is comprised of layers of fibrous media (column 3, lines 52-63), the outside most-layer proximate jacket 27 comprising it's outer peripheral surface and inner-most layer proximate cartridge bore outer surface comprising inner peripheral surface , and a flow-directing structure 26 made of layers of wide-mesh horizontal screen or *tissue 21* extending radially outwardly from central end caps 24 and 28 (*column 3, lines 50-62*, column 5, lines 2-5 and column 6, lines 5-8). *The filter of Stutzman constitutes a substantially hollow filter element as term is understood from the instant Specification and Drawings (figure 3) in that it occupies an annular space surrounding a hollow portion occupied by outflow chamber 25 and sealing elements 4. The bottom and top edges of the layers of tissue 21 form upper and lower end surfaces that extend/span from the inner-most layer of tissue 21 to the outermost layer of filter tissue.*

A portion of the flow through the inflow chamber is upwards through the outer and central layers of the filter element in a rising flow and is then redirected radially inwards so as to then fall upon and enter the filter element at an inner peripheral surface 34 of the filter element. The flow-directing structure 26 can also be considered a guide for claim 8. These claims do not require the entirety of the flow to flow in any particular flow pattern or specify the direction of flow of flow portion as it enters the filter element at said inner peripheral surface.

Regarding claim 2, the upper portion of the inflow chamber can also be considered an inlet to a downwardly directed flow through the outer layers of the filter.

For claim 3, the flow-path formed by layers of screen of mesh 26 are also of a narrowed cross-section.

For claims 4 and 5, flow between baffle 16 and lower extent of the filter layers has a rising flow.

For claim 6, the inflow chamber has a generally stream-lined shape, especially portion comprising annular chamber 29.

Claim 10 is rejected under 35 U.S.C. 102(b) as being anticipated by Campo patent 3,675,776. Campo discloses inflow chamber 22/A, outflow chamber 24/B, filter element 28 comprising a plurality of integral, immediately adjacent layers 60 and 61 that each comprise target trapping/adsorbing elements that act as fall-off preventing elements that are of dissimilar materials and hence are necessarily and inherently of different pore or mesh sizes (see column 3, lines 35-60). Claim 10 does not specify the particular orientation of the target trapping and falling-off element layers. Filter element layers may be of material as diverse as plastic, activated carbon/charcoal and zeolite (column 3, lines 34-58). Campo at column 5, lines 10-15 teaches to filter "many diverse fluids" with respective particular contaminants. The claims do not specify what the direction of flow is through the filter. Outer-most element 61 may constitute a fall-off preventing element for inner-most filter element layer 60, element 61 being on the inner side surface of the surrounding annular inflow path that directs fluid upwardly.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 7,9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stutzman in view of Budzich. These claims differ in requiring a differential pressure sensor to detect pressure differences between inflow chamber and outflow chamber. However, Budzich teaches a differential pressure sensor, whose details are extensively discussed at (Abstract, column 2, lines 35-41). It would have been obvious to have incorporated a differential pressure sensor of Budzich into the Stutzman oil filtering device, to ensure timely opening of the drain

outlet in the bottom of the filter housing, to avoid entrainment of separated water and particles into the flow of oil fluid through the filter.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Campo patent 3,675,776 in view of Kuh et al patent 4,681,677. Claim 11 also differs in requiring a differential pressure sensor to detect pressure differences between inflow chamber and outflow chamber. However, Kuh teaches a differential pressure sensor, whose details are discussed at (Abstract, column 3, lines 55-64). It would have been obvious to have incorporated a differential pressure sensor of Budzich into the Stutzman oil filtering device, to ensure timely changing of the filter element or filter element cleaning when it has become clogged and no longer provides adequate flow or filtration capacity.

Applicant's newly made arguments with respect to claims 1-12, filed on October 22, 2008 at pages 3-4 of the Office Action have been fully considered but they are not persuasive.

It is argued that the claiming of the filter surfaces as in amended claims 1 and 8 now distinguishes over Stutzman. However, the filter element 21 of Stutzman when taken as a whole has substantially the same geometric configuration of the instant filter element, in that it occupies an annular cylindrical space surrounding a hollow interior conduit.

With regard to claim 10, it is argued that the filter device of Campo is for use with drinking water instead of hydraulic equipment, hence would not be concerned with the same types of contaminants. However, it is submitted that the claim merely recites filtering of "foreign matter", hence not to any particular fluid; further note that Campo at column 5, lines 10-15 teaches to filter "many diverse fluids" with respective particular contaminants.

It is also argued that Campo does not disclose a fall-off preventing element being provided on "the side surface of the inflow path", as flow in Campo is from outside-in instead of inside out. It is submitted that the claims do not specify what the direction of flow is through the filter. Also, outer-most element 61 may constitute a fall-off preventing element for inner-most filter element layer 60, element 61 being on the inner side surface of the surrounding annular inflow path that directs fluid upwardly.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Drodge at his direct government telephone number of 571-272-1140. The examiner can normally be reached on Monday-Friday from approximately 8:30 AM to 12:30 PM and 2:00 PM to 6:00 PM.

Alternatively, to contact the examiner, send a communication via E-mail communication to the Examiner's Patent Office E-mail address: "Joseph.Drodge@uspto.gov". Such E-mail communication should be in accordance with provisions of MPEP (Manual of Patent Examination Procedures) section 502.03 & related MPEP sections. E-mail communication must begin with a statement authorizing the E-mail communication and acknowledging that such communication is not secure and will be made of record, under Patent Internet Usage Policy Article 5. A suggested format for such authorization is as follows: "Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with me concerning any subject matter of this application by electronic mail. I understand that a copy of these communications will be made of record in the application file.

Additionally, the examiner's supervisor, David Roy Sample, of Technology Center Unit 1797, can be reached at 571-272-1376.



Art Unit: 1797

The formal facsimile phone number, for official, formal communications, for the examining group where this application is assigned is 571-273-8300.

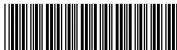
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or Public PAIR, and through Private PAIR only for unpublished applications. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JWD

October 8, 2008

/Joseph W. Drodge/

Primary Examiner, Art Unit 1797

**Application Number****Application/Control No.**

10/802,027

**Examiner**

Joseph W. Drodge

**Applicant(s)/Patent under  
Reexamination**

SHOJI ET AL.

**Art Unit**

1797